



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,148	06/29/2006	Michael F. Greene	20040136	9898
22590	7590	03/05/2012		
BAE SYSTEMS PO BOX 868 NHQ1-719 NASHUA, NH 03061-0868			EXAMINER	
			LAU, HOI CHING	
			ART UNIT	PAPER NUMBER
			2612	
			MAIL DATE	DELIVERY MODE
			03/05/2012 PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/585,148

**Applicant(s)**

GREENE ET AL.

**Examiner**

HOI LAU

**Art Unit**

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 December 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 5) ☒ Claim(s) 1-18 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1-18 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 29 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-CIB-08)  
Paper No(s) Mail Date \_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s) Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

1. Claims 1- 18 have been examined.

***Response to Amendment***

2. Examiner acknowledges the changes made to the claims by applicant via amendment. The rejection of claim 1 under 35 U.S.C. 112, second paragraph, for insufficient antecedent basis from previous office action has been overcome as a result of amendment and remarks.

***Response to Arguments***

3. Applicant's arguments filed July 19, 2011 have been fully considered but they are not persuasive. The followings are applicant's arguments:

- a. Mason et al. solve a problem by providing special radios, whereas, Applicants provide the "typical radios currently in use" with intercommunication adapters. This means that the first responders can keep their favorite hand-held radios to which they and their commanders have become accustomed and quickly adapt them for intercommunication with the subject module.

The Applicants have claimed standard incompatible non-specialized transceivers that are not specially adapted for interoperability. These are called "traditional" radios.

- b. Providing a module at each transceiver to establish interoperability is not shown or taught by Zuckerman et al. In short, Zuekerman does not teach how to allow

standard transceivers to intercommunicate by attaching a module to each of their transceivers.

The followings are response to applicant's arguments:

1. Regarding arguments (a), the rejection by using the invention of Mason is relied on the teaching of a transceivers with antenna module which having interoperability to convert audio information available from the transceivers to a common format and frequency; a sensor; a circuit; a downloading unit as recited in claim 1. Specifically, the antenna module is able to enhance interoperability.

Since the Prior Art reference Mason et al. (US 2005/0001720) is made prior to the claimed invention, therefore the transceiver as suggested by Mason is one of the traditional transceiver which known in the art. In addition, the argued section "typical radios currently in use" of Mason is not persuasive. The "non-typical radios" of Mason does not limiting the transceiver being one of the traditional transceiver in order to facilitate the coupling with the add-on module as recited in the claims 1 and 8.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., intercommunication adapters) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

2. Regarding arguments (b), Applicant's arguments with respect to claims have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, the claim limitation "not specially adapted for interoperability and therefore potentially incompatible" is indefinite and ambiguous as following:

1) The claim does not specific define the term "interoperability" which is now could be broadly interpreted as --for communication--. Therefore the claim is lack clarity what is being claim as "traditional transceiver not specially adapted for communication". One of ordinary skill in the art at the time of invention would know the incorporation with transceiver is used for communication.

2) The phase "therefore potentially incompatible" is indefinite and ambiguous. It lacks clarity rather the "traditional transceiver not specially adapted for communication" is specific made incompatible or not incompatible at all. The term "potentially" combines with the other claim subject matter makes the limitation being indefinite. In addition, the

term "incompatible" lacks clarity of what is incompatible with the traditional transceiver and how it is being done?

As per Claims 2-7, they are rejected based on the dependency of claim 1.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mason et al. (U.S. 2005/0001720).

Regarding **claim 1**, Mason teaches a system with use on an ad hoc temporary incident area network in which

a **number** of transceivers [Fig. 6; data/signal processing portion of the FASS device include CPU, DSP, power, MIC]

(the components of the FASS device support communication via any number of protocols and frequency bands known in the art, therefore would have been obvious to be standard protocols and frequency bands known in the art, specifically 802.1X standard, Bluetooth, etc. Therefore, it would have been obvious to one of the ordinary

skill in the art the transceiver as suggest by Mason is a **standard/one of known/traditional** transceiver associates with format and frequency)

is in use with and coupled to

a **number** of corresponding modules [standalone add-on module] (the antenna and the corresponding receiver and transmitter interface would have been obviously structure as a standalone add-on/separate component from the CPU and other components of the unit 21000) for providing transceiver interoperability [communication],

each coupled to one of said transceiver to transmit audio information available from the transceiver to which said module is coupled to a common format and frequency of the temporary incident area network, thus to assure that all receivers [would have been obvious shown by other FASS device on the network] on said ad hoc temporary incident network can intercommunicate (Fig. 9-10);

a sensor coupled to one of said modules for coupling sensor data to said module (Fig. 6);

a circuit (the internal circuitry for communication) at said module for uploading sensor data to said network; and,

a downloading unit [would have been obvious shown by the command terminal and/or the other field device on the network based upon the similarity of the operational function; Para. 63,84,90] at a node for downloading the sensor data carried by said network and for displaying said sensor data at said node, thus to reliably provide sensor data by using said network (fig. 1, 2, 4, 6; Para. 24-27, 31-36, 42, 46, 64, 73, 78, 93).

This system of Mason would have been obvious automatically converts audio information available from the transceiver to a format and transmits the converted audio information in a common frequency assigned to equipment operating on the temporary incident area network (Para. 33, 40-43, 46, 57, 60, 69, 70, 73-74, 79, 93).

Mason further discloses an incident an incident area network system comprises the radios device automatically select communication bands/frequencies using signal information of the bands. As each responder individual arrives on scene they are immediately and automatically networked with each other and with the on-scene incident commander via their field device. The responder radios support peer-to-peer ad-hoc wireless networking, with multi-hop routing of data packets among the nodes. The responder radios use a Voice over Internet Protocol (VOIP) or other voice enabling technique and wireless local area network (WLAN) for data and audio communications. The responder radio transmits and receives voice and data messages on common frequencies for all responders in order to provide an integrated response by responders from all agencies present in the incident area. The responder radios self-configure the communication channels to optimize data transmission. The FASS device use on or more several RF technology and modulation formats (Para. 33,40-43, 46, 57, 60, 69, 70, 73-74, 79, 93) wherein the components of the responder radios support communication via any number of protocols and frequency bands known in the art.

Regarding **claim 2**, Mason meets the limitation of claim and further shows the apparatus including a camera at said module for providing image signals as an output thereof, said uploading circuit uploading said image signals (Para. 86, 119).

Regarding **claim 3-4**, Mason meets the limitation of claim and further shows the image signals include video signals (Para. 119) wherein such video signals have been obvious to one of ordinary skill in the art is provided by the camera because the camera device as shown by Mason could be an video camera or still image camera, therefore provide video data as recite by Mason and still picture signal as a conventional still image capturing camera in the art since they an alternative output and would be using one known technique to improve similar device.

Regarding **claim 5**, Mason meets the limitation of claim and further shows the sensor is taken from the group consisting of location sensors, oxygen tank sensors, gas sensors, HAZMAT sensors, photo-ionization sensors and biometric sensors (Para. 86)

Regarding **claim 6**, Mason meets the limitation of claim and further shows an incident commander terminal having a display coupled to said node and wherein the sensor data transmitted over said network is displayed for said incident commander at the associated incident commander display terminal, thereby to provide said incident commander with situational awareness based on said sensor data (fig. 1, 2, 4, 6; Para. 24-27, 31-36, 42, 46, 64, 73, 78).

Regarding **claim 7**, Mason meets the limitation of claim and further shows the sensor data includes information relating to the location of said module and wherein

said display includes a map and an icon indicating the location of said module (fig. 1, 2, 4, 6; Para. 24-29, 33, 41, 44, 45).

6. Claims 8, 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mason et al. (U.S. 2005/0001720), in view of Schlager et al. (US 2003/0102972).

Regarding **claim 8**, Mason teaches an ad hoc temporary incident area network having equipment operating thereon:

a **number** of handheld transceiver (Fig. 6; data/signal processing portion of the FASS device include CPU, DSP, power, MIC), having audio in, audio out (MIC and speaker); and,

a **number** of mini module (the antenna and the corresponding receiver and transmitter interface would have been obviously structure as an add-on/separate component from the CPU and other components of the unit 21000) each adapted to be carried [coupled] by one of the number of handheld transceivers and coupled to outputs of the components of transceiver for at least automatically converting verbal communications associated with said transceiver to the common frequency and format [compatible with said network] and transmitting converted verbal communications in a common frequency, such that the use of the mini add-on modules establishes a common frequency and format regardless of what frequencies and format said handheld transceivers are using, said mini module including circuits for transmitting said verbal communications between modules over said network in a bi-directional manner (fig. 1, 2, 4, 6; Para. 24-27, 31-36, 42, 46, 64, 73, 78).

[This system of Mason would have been obvious automatically converts audio information available from the transceiver to a format and transmits the converted audio information in a common frequency assigned to equipment operating on the temporary incident area network (Para. 33, 40-43, 46, 57, 60, 69, 70, 73-74, 79, 93)]

Mason further discloses an incident an incident area network system comprises the radios device automatically select communication bands/frequencies using signal information of the bands. As each responder individual arrives on scene they are immediately and automatically networked with each other and with the on-scene incident commander via their field device. The responder radios support peer-to-peer ad-hoc wireless networking, with multi-hop routing of data packets among the nodes. The responder radios use a Voice over Internet Protocol (VOIP) or other voice enabling technique and wireless local area network (WLAN) for data and audio communications. The responder radio transmits and receives voice and data messages on common frequencies for all responders in order to provide an integrated response by responders from all agencies present in the incident area. The responder radios self-configure the communication channels to optimize data transmission. The FASS device use on or more several RF technology and modulation formats (Para. 33,40-43, 46, 57, 60, 69, 70, 73-74, 79, 93) wherein the components of the responder radios support communication via any number of protocols and frequency bands known in the art.

Mason does not explicitly mention the recited two-way radio device incorporates with a push-to-talk outputs available external thereto.

However, such push-to-talk outputs available externally would be a well-known feature for two-way radio device.

In the analogous art, **Schlager** specific mention a communication device has a push-to-talk arrangement thereof (Fig. 1-5), therefore would have been obvious to one of ordinary skill in the art at the time of invention of incorporate push-to-talk output with apparatus as taught by Mason because it would provide manually activation for voice communication.

Regarding **claim 10**, the combination meets the limitation of claim and Mason further shows a sensor coupled to said mini module, said mini module including a circuit for uploading data from said sensor to said network (fig. 1, 2, 4, 6; Para. 24-27, 31-36, 42, 46, 64, 73, 78).

Regarding **claim 11**, the combination meets the limitation of claim and Mason further shows a predetermined number uniquely identifying at least one of said mini module, and wherein said uploading circuit uploads said unique identifying number (Para. 72, 78, 94, 98, 110-111).

Regarding **claim 12**, the combination meets the limitation of claim and Mason further shows a camera coupled to said at least one of said mini module and wherein said uploading circuit includes a circuit for uploading the output from said camera to said network (Para. 86, 119).

Regarding **claim 13**, the combination meets the limitation of claim and Mason further shows the image signals include video signals (Para. 119) wherein such video

signals have been obvious to one of ordinary skill in the art is provided by the camera because the camera device as shown by Mason could be an video camera or still image camera, therefore provide video data as recite by Mason and still picture signal as a conventional still image capturing camera in the art since they an alternative output and would be using one known technique to improve similar device.

Regarding **claim 14**, the combination meets the limitation of claim and Mason further shows including wearable sensors coupled to said mini module adapted to be worn by the individual using said transceiver, said sensors coupling data collected by a sensor that relates to events in the immediate vicinity of said individual to said mini module, whereby sensor data uploaded to said network and available at a node thereof is downloadable to said node for providing situational awareness of conditions in the incident scene at said individual, thus to provide situational awareness based on sensed conditions at said individual (Para. 34, 25, 85, 89, 93).

Regarding **claim 15**, the combination meets the limitation of claim and Mason further shows the sensor includes a camera, whereby images in the vicinity of said individual are transmitted over said network to said node to support situational awareness (Para. 34, 86, 119, 25, 85, 89, 93).

Regarding **claim 16**, the combination meets the limitation of claim and Mason further shows the mesh wireless network for coupling said sensor to said mini module, whereby said sensor can be worn by said individual and wirelessly connected to said mini module. The Mesh wireless network would have been obvious to one of ordinary

skill in the art at the time of invention is implemented as a local wireless network in respect to the system and the distance or use between the components.

Regarding **claim 17**, the combination meets the limitation of claim and Mason further shows the wireless network includes a Blue Tooth network (Para. 34, 86, 119, 25, 85, 89, 93).

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mason et al. (U.S. 2005/0001720), in view of Schlager et al. (US 2003/0102972), further in view of Yang (US 2004/0185902).

Regarding **claim 9**, the combination meets the limitation of claim, but does not explicitly mention the handheld transceiver includes a battery and an external power connection contact and wherein said mini module includes a power input connection contact coupled to said external power connection contact for the powering of said mini module from the battery of said handheld transceiver.

In the analogous art of communication system, Yang discloses a handheld communication transceiver module [for example, cell phone] includes a battery and an external power connection contact and mini module [input and output interface unit] includes a power input connection contact coupled to said external power connection contact for the powering of said mini module from the battery of said handheld transceiver during the combination mode if only one of the module [for example, the main unit] is provided with battery power (Fig. 1-2, Para. 5, 8-9, 11).

It would have been obvious to one of ordinary skill in the art at the time of invention to implement power connection between the two units as suggest by Yang because it would allow one of the unit serves as the energy source in order to reduce the number of the battery components of the system during the combine configuration. In addition, it would allow the mini module as a separatable device which enhance replacement of device if failure of any electronic components. Further the infrastructure for the functionality between the different electronic module, for example, the mini module and the handheld transceiver in respect to the integration or separate-in-part would depend on the configuration of the system based upon the specific application.

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mason et al. (U.S. 2005/0001720), in view of Schlager et al. (US 2003/0102972), further in view of Fors et al. (US 7,289,825).

Regarding **claim 18**, the combination meets the limitation of claim and Mason further shows a headset communicating with said mini module, whereby verbal communications can be established between said mini module and said network regardless of said handheld transceiver (fig. 1, 2, 4, 6; Para. 59, 73, 78), but does not explicitly mention the headset is wireless communicating with the mini module.

In the analogous art, Fors discloses a wireless radio communication device 110 is wireless communicating with a wireless headset and configured to verbal communicate with different terminals on the network (Fig. 1-3; col. 4, line 59 - col. 5, line 38; col. 9, lines 38-53).

It would have been obvious to one of ordinary skill in the art at the time of invention to associate the wireless headset as suggest by Fors to the headset components as shown by Mason, so the user could freely operates the headset without the inconvenience of any wired connection between the mini module and the headset. One of ordinary skill in eth art could have pursued the known potential solutions with a reasonable expectation of success by using either wired or wireless connection.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOI LAU whose telephone number is (571)272-8547. The examiner can normally be reached on M- F 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Bugg can be reached on (571)272-2998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hoi C Lau/  
Primary Examiner, Art Unit 2612